

CLAIMS

What is claimed is:

1. Method of making hot strips of a workable lightweight construction steel which in particular can be easily deep-drawn cold, comprising the main elements Si, Al and Mn, and having a high tensile strength and TRIP and/or TWIP characteristics, characterized in that the contents in mass-% amount for
C 0.04 to \leq 1.0
Al 0.05 to $<$ 4.0
Si 0.05 to \leq 6.0
Mn 9.0 to \leq 30.0,
the remainder being iron including common incidental steel elements, wherein a melt is cast in a horizontal strip casting unit, close to final dimensions at calm flow and without bending, to form a pre-strip in the range between 6 and 15 mm, and subsequently is fed for further processing.
2. Method according to claim 1,
characterized in
that the carbon content amounts to 0.06 to \leq 0.7 %.
3. Method according to claim 1 and 2,
characterized in
that the steel contains Cr up to \leq 6.5 %.
4. Method according to claim 1 - 3,
characterized in
that the Mn content amounts to 9 - 18 %.

5. Method according to claim 1 - 3,
characterized in
that the Mn content amounts to 18 - 22 %.
6. Method according to claim 3 - 5,
characterized in
that the Cr content amounts to 0.3 - 1.0 %.
7. Method according to claim 1 - 3,
characterized in
that the Mn content amounts to 22 - 30 %.
8. Method according to claim 3 and 7,
characterized in
that the Cr content amounts to 0.05 - 0.2 %.
9. Method according to the claims 1-8,
characterized in
that the Si content amounts to 2.0 - 4.0 %.
10. Method according to the claims 1 - 9,
characterized in
that the Al content amounts to 2.0 - 3.0 %.
11. Method according to the claims 1 - 10,
characterized in
that the hydrogen content amounts to < 20 ppm.

12. Method according to claim 11,
characterized in
that the hydrogen content amounts to < 5 ppm.
13. Method according to the claims 1 - 12,
characterized in
that Cu up to ≤ 4 % is optionally contained.
14. Method according to the claims 1 - 13,
characterized in
that titanium and zirconium in total of up to ≤ 0.7 % are optionally contained.
15. Method according to the claims 1 - 12,
characterized in
that niobium and vanadium in total of up to ≤ 0.06 % are optionally contained.
16. Method according to the claims 14 and 15,
characterized in
that titanium, zirconium, niobium and vanadium in total of up to ≤ 0.8 % are
optionally contained.
17. Method according to one of the claims 1 - 16,
characterized in
that the speed of the melt feed is identical to the speed of the revolving
conveyor band.

18. Method according to one of the claims 1 - 17,
characterized in
that the strand shell of a strip, which extends across the width of the conveyor band, is forming as solidification commences, with all surface elements of the strand shell subjected to substantially identical cool-down conditions.
19. Method according to one of the claims 1 - 18,
characterized in
that the melt being placed on the conveyor band is substantially through solidified at the end of the conveyor band.
20. Method according to claim 1 and 19,
characterized in
that following the through solidification and before commencement of the further processing, the pre-strip advances through a homogenization zone.
21. Method according to claim 1 and 20,
characterized in
that the further processing involves a coiling of the pre-strip.
22. Method according to claim 1 and 20,
characterized in
that the pre-strip undergoes inline a rolling process and is then coiled up.
23. Method according to claim 1 and 20,
characterized in
that the deformation degree is at least 50 %, preferably > 70 %.